

SS10680

IOT GATEWAY MODBUS MQTT



MAIN FEATURES

- MODBUS RTU/TCP MASTER PROTOCOL
- IOT MQTT PROTOCOL WITH SSL/TLS
- CONFIGURABLE VIA WEB PAGE
- HARDWARE WATCHDOG FUNCTION
- FULL ELECTRICAL LINES ISOLATION
- IOLOG MODULES LIBRARY INCLUDED
- COMPATIBLE WITH AZURE AMAZON AND MOSQUITTO
- REMOTE FIRMWARE UPDATE

GENERAL DESCRIPTION

The SS10680 gateway is an industrial device specifically designed to implement data collection systems which operate according to the Internet of Things (IoT) paradigms; it allows bidirectional communication between field equipment and the Cloud software platform. It provides a Modbus RTU master interface on RS485 or Modbus TCP over Ethernet through which it interrogates devices distributed in the field. The variables read by Modbus slave devices are sent to the Cloud via MQTT protocol with SSL / TLS client certificate authentication on variation or fixed time. Through web pages it is possible to define the variables to be sampled of any Modbus device, or to recall the devices present in the library (Iolog series SS3000, SS8000, SS10000). It is possible to configure the MQTT message structure in order to better adapt to the different MQTT Brokers available (Amazon AWS, IBM Watson IoT, Azure IoT, Mosquitto etc.) The configuration of the device is carried out via Web pages and it is possible to remotely update the firmware.

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SS10680 GATEWAY

SS10680 gateway is a device that provides a RS485 serial interface for Modbus RTU master protocol and an ethernet interface for Modbus TCP master and SSL/TLS MQTT protocols featuring a low-profile format which makes it suitable for DIN rail mounting inside industrial electrical cabinets. Electrical connections are available via plug-in screw terminals. The full galvanic isolation ensures a good protection against interference present in industrial environments. A dedicated hardware Watch-Dog manages the automatic reset of the device. Signalling leds allow an immediate diagnosis of device operation. The device power supply requires a voltage between 10 Vdc and 30Vdc. The device is protected against power supply polarity inversion.

COMMON FEATURES

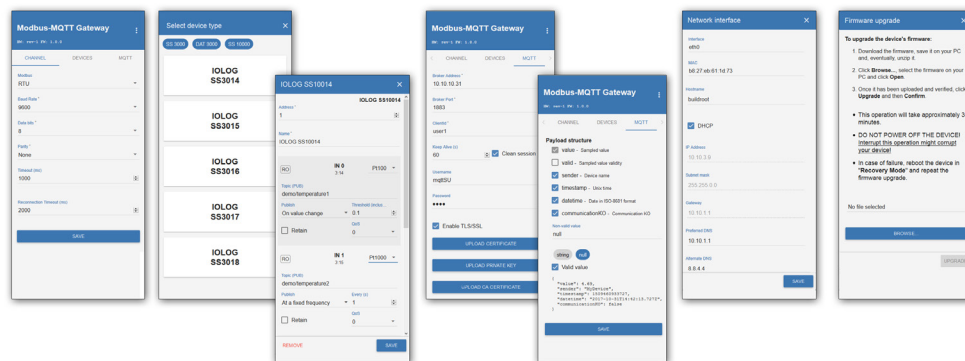
Communication Protocols	- ModBus RTU - ModBus TCP - MQTT with SSL/TLS
Network Interface	Ethernet 10/100Base-T
Data transmission (asynchronous serial)	Maximum Baud Rate 115,2 Kbps Maximum distance 1,2 Km
Insulation voltage	1500 Vca 50 Hz, 1 min.(RS485 / Power) 1000 Vca 50 Hz, 1 min. (Ethernet/Power)
EMC	Immunity EN 61000-6-2 Emission EN 61000-6-4
Power Supply	Supply voltage 10 .. 30 Vcc Current consumption max 200 mA @ 24 Vcc Polarity inversion protection 60 Vcc max
Temperature & Umidity	Operating temperature 0°C .. +70°C Storage temperature -20°C .. +70°C Humidity (non condensing) 0 .. 90 %
Housing	Material Self-extinguishing plastic Mounting EN-50022 DIN rail Weight about 200 g.

PROGRAMMING

Device programming is carried out via web pages. First we define the variables to be read by the field devices and sent to the Cloud via the MQTT protocol. In the case of a generic Modbus device, we define the addresses of the variables to be sampled. In the case of SS3000, SS8000 and SS10000

series IOlog modules, we simply choose them from the library, then enter any configuration parameters. Then we proceed to configure the RS485 interface (baud rate, parity, ...). Finally we configure the network interface (addresses, mode, ...) and define the MQTT message structure,

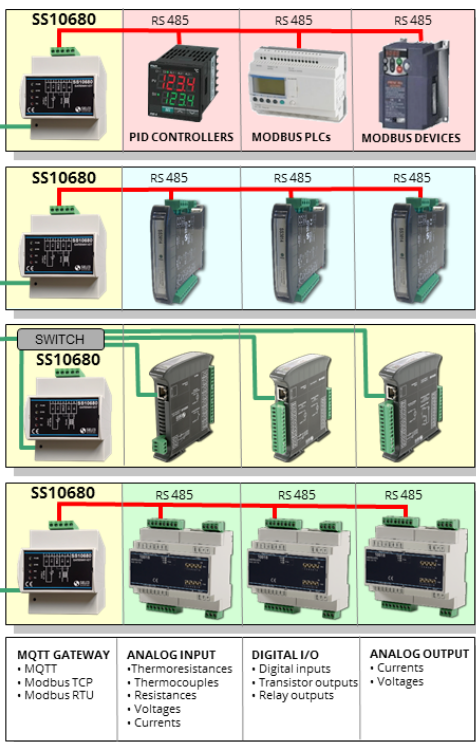
considering the methods with which we want to record data on the Cloud, and the features of the different MQTT Brokers available (Amazon AWS , IBM Watson IoT, Azure IoT, Mosquitto etc.). Also via the web pages, it is also possible to request remote firmware update.



**IOTLOG
INDUSTRY 4.0**
IOT - MQTT System
for Modbus Devices

CLOUD
MQTT
• MQTT BROKER
• EVENT NOTIFIER
• DATABASE
• DASHBOARD
• CUSTOM HMI

WEB APP



**IOLOG
SS10680**
MQTT Gateway for
Generic Modbus Devices

**IOLOG
SS3000**
MQTT Gateway and
Modbus RTU I/O Modules

**IOLOG
SS8000**
MQTT Gateway and
Modbus TCP I/O Modules

**IOLOG
SS10000**
MQTT Gateway and
Modbus RTU I/O Modules

MQTT GATEWAY • MQTT • Modbus TCP • Modbus RTU	ANALOG INPUT • Thermoresistances • Thermocouples • Resistances • Voltages • Currents	DIGITAL I/O • Digital inputs • Transistor outputs • Relay outputs	ANALOG OUTPUT • Currents • Voltages
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